HW p. 38 #5, 7, 21, 23 , 25, 27

5) (a) yes (b) thriller/horror

7) (a) Comedy (b) easier to see which category is the most popular in the bar chart.

21) (a) P(W) = 268/325 = 82.46%

(b) P(2) = 42/325 = 12.92%

(c) P(W 2) = 36/325 = 11.08%

(d) P(2|W) = 36/268 = 13.43%

(e) P(W|2) = 36/42 = 85.71%

23) (a) WHITE (b) MINORITY

4yr: 73.88% 77.19%

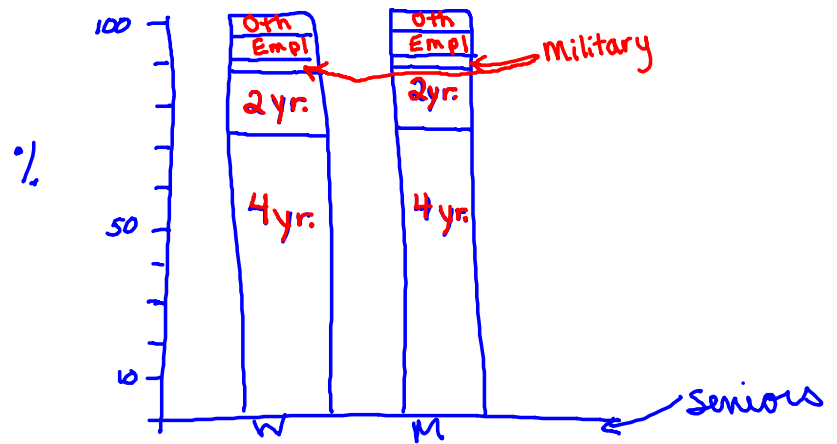
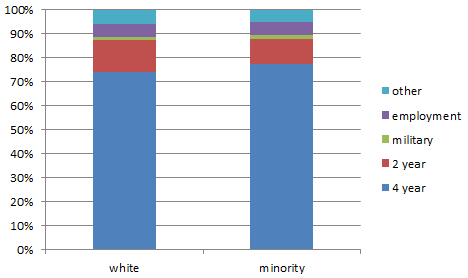
2yr: 13.43% 10.53%

Mil: 1.49% 1.75%

Emp: 5.22% 5.26%

Oth: 5.97% 5.26%

(c)



(d) Comparison:

- In both racial groups, about 3/4 (75%) of seniors plan to go to a 4-year college

- Military is the least popular choice in both racial groups.

- In fact the percentages of students in each category are very similar between the two racial groups. They are all less than 5% apart, indicating independence between race and post HS plans. Race does not affect post HS plans.

25) (a) P(Asian) = 292/1755 = 16.64%

(b) P(Asian|Accepted) = 110/931 = 11.82%

(c) P(Accepted|Asian) = 110/292 = 37.67%

(d) P(Accepted) = 931/1755 = 53.05%

27) Independence?

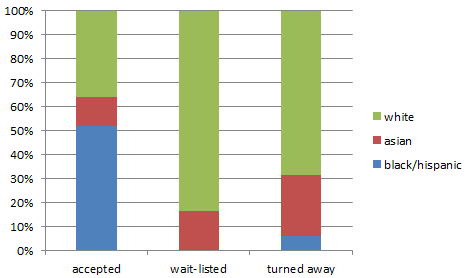
**Accept wait turned**

Bl/H 52.1% 0% 6.1%

Asian 11.8% 16.3% 25.4%

White 36.1% 83.7% 68.5%

Calculate conditional probabilities:



No, they are not independent. The percentages of each race within each admission decision are over 5% apart. For example, the percentages of Asians ranges from 11.8% to 25.4% within each of the admission decisions.

OR: Other conditional probabilities:

